Appalachian region which was generally west of the mean trough, the upper Mississippi Valley and extreme northern border areas westward to the Pacific coast which were persistently under the influence of northerly flow, the Central Plains which was somewhat south of the northern confluence zone and also to some extent in a "rain shadow" or zone of dessication of the Pacific moist tongue east of the Rockies. Another dry area extended from the extreme Southwest northeastward into Utah, due to the prevalence of anticyclonic vorticity east of the Pacific coastal trough. Extreme southern Texas was also dry under strong anticyclonic vorticity aloft just south of the southern confluence zone.

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Weather Note

WORLD RECORD LOW TEMPERATURE

A report of a new low temperature record for the world* was received from Mr. Morton J. Rubin, U. S. Weather Bureau meteorologist stationed with the Soviet IGY Antarctic expedition at Mirny, Antarctica. Three successive records were set: at Vostok (78°27′ S., 106°52′ E., elevation approximately 3500 meters) on June 15, −113.3° F. (−80.7° C.) was recorded; at Sovetskaya (78°24′ S., 87°35′ E., elevation approximately 3700 meters) on June 19 the temperature fell to −113.8° F. (−81.0° C.), and on June 25 to −117.4° F. (−83.0° C.). The new record at Sovetskaya is "taken from corrected weekly thermograph trace with 3-hourly comparisons during periods of extreme temperatures." The following further information regarding the conditions under which these temperatures occurred is taken from Mr. Rubin's dispatches.

June 15 Vostok reading of −80.7° C.: From 0000 GMT, June 14 the temperature at Vostok fell from −69° C., with a surface wind from the southwest at 6 to 4 kt. and partly cloudy skies with altocumulus, to −78° C. with west wind at 2 kt. and clear skies at 1200 GMT on June 15. By 1800 GMT on June 15 the temperature had fallen to −79° C. with northwest wind of 2 to 4 kt. and clear skies. The minimum (−80.7° C.) was recorded between 1800 GMT, June 15 and 0000 GMT, June 16. During the same period at Komsomolskaya (74°08′ S., 97°17′ E., elevation approximately 3200 meters) temperatures dropped to −70° to −72° C. with southerly surface winds at 6–8 kt. and clear skies. At Sovetskaya temperatures fell from −67° to −75° C. with northeast winds at 8 kt. and clear skies. There was a 500-mb. col in the region of 80° S., 95° E. with generally weak westerly flow. At 300 mb. a Low was located near 80° S., 120° E. with a col stretching from 80° S. southeastward to 80.8° S., and weak west-southwesterly flow.

June 19 Sovetskaya low of −81.0° C.: At Sovetskaya the temperature fell from −69° C. at 0000 GMT, June 18 to −81° C. at 0000 GMT, June 19, with variable surface winds, northeast to east, at 8–10 kt. and clear skies during the entire period. Komsomolskaya's temperature dropped from −63° to −72° C. with east-southeast to south winds dropping from 8 to 4 kt. and partly cloudy conditions becoming clear at the end of the period. At Vostok the temperature rose from −79° to −74° C. while the wind changed from northwest at 8 kt. to west at 6 kt. with clear skies. Conditions at 500 and 300 mb. were approximately the same, with a ridge along 70° E. and a trough along 120° E. with marked south-southwest flow.

June 25 Sovetskaya low of −83.0° C.: Beginning at 0000 GMT, June 25 temperature at Sovetskaya fell from −72° to −80° C. at 0000 GMT, June 26; a surface wind from the east dropped from 12 kt. to 8 kt. under clear skies. The minimum temperature (−83.0° C.) was recorded at approximately 2200 GMT, June 25. At Komsomolskaya at the same time under clear skies the temperature dropped from −66° to −68° C., with a wind from the south-southeast changing from 12 to 10 kt. Vostok's temperature fell from −73° to −75° C. The wind there changed from southwest at 8 kt. to west at 4 kt.; skies were partly cloudy with altocumulus.

*See *Monthly Weather Review*, vol. 85, No. 11, Nov. 1957, p. 383, for the previous record low also recently reported from Antarctica.